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ABSTRACT

The booklet identifies 217 geography skills to be acquired by students in kindergarten through grade six. It is intended to help teachers in developing geographical strands and outcomes in the elementary social studies curriculum. Skills are presented for three grade levels: kindergarten through grade two, grades three and four, and grades five and six. Within each division are three levels of sequencing. In most cases it is important for students to master one level before moving to the next because many of the skills are sequenced from the simple to the complex. The skills are divided into the following strands: size and shape, direction and location, scale and distance, symbols, and earth and sun relationships. The sixth strand--uses, inferences, and patterns--applies the other strands in the critical thinking processes. (Author/AV)

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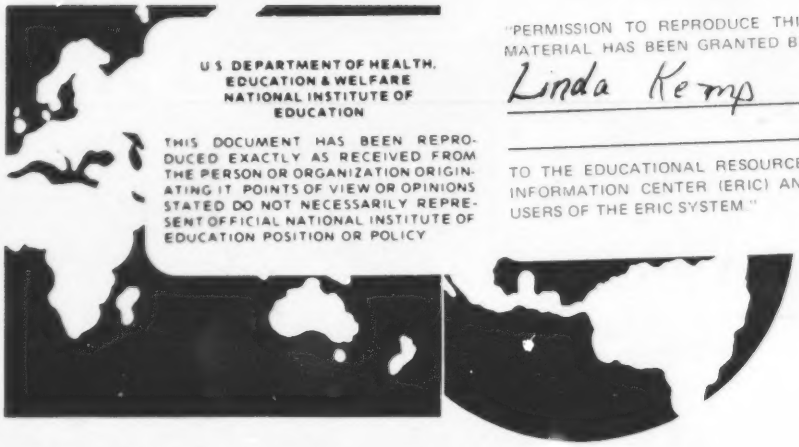
GEOGRAPHIC SKILLS IN THE SOCIAL STUDIES, Grades K–6



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FOREWORD

Geographic Skills in the Social Studies, Grades K-6 is designed to assist curriculum planners, teachers, and teacher educators at the elementary level in developing curriculum for the social studies which includes geographic strands essential for students' development. However, since geographic skills are of lifelong value, this publication will be of interest not only to the educational community but to parents as well.

The publication may be used by individual teachers or by groups in staff meetings, as a resource in education courses, or as a springboard for developing geographical strands and outcomes in the elementary social studies curriculum K-6.

We hope this publication will provide assistance to all those interested in or concerned with geographic learning in the social studies.

M. L. Brockette
Commissioner of Education

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INTRODUCTION

When the present *Framework for the Social Studies* was developed by the Texas Education Agency and adopted by the State Board of Education in 1970, an interdisciplinary approach to elementary social studies was introduced into Texas schools. The *Framework* includes areas which, in many cases, had previously been slighted or omitted from the elementary social studies program. These areas include elements of economics, anthropology, sociology, and political science which are integrated with the traditional geography and history. As new textbooks were developed according to the *Framework*, concepts, skills, and information associated with geography often seemed lost in the new interdisciplinary emphasis. When a survey was sent to Texas school districts in 1976 asking for opinions on the *Framework for the Social Studies* and programs for the state, one of the specific needs indentified was for more geographic skills and information in all areas and levels of the social studies. It is in response to this need that *Geographic Skills in the Social Studies, Grades K-6* has been developed.

This publication endeavors to take the research of the past two decades, to synthesize it according to the current needs of Texas, and to put it into a usable form for curriculum designers and classroom teachers.

Skills are presented in three divisions: Grades K-2, 3-4, and 5-6. Within each division are three levels of sequencing. In most cases, it is important for students to master one level before moving to the next since many of the skills are sequenced from the simple to the complex. Such sequencing will help students avoid confusion as they attempt to develop concepts and skills.

The skills are divided into the following strands: Size and Shape, Direction and Location, Scale and Distance, Symbols, and Earth and Sun Relationships. The sixth strand – Uses, Inferences, and Patterns – attempts to apply the other strands in the critical thinking processes.

A number of skills involve the use of color as a symbol. As some students may be completely or partially color blind, symbols other than color may be needed for such students.

The improvement and updating of curriculum elements and materials are continuing needs, and the development of a balanced program of social studies experiences should provide quality education for all

students. The competencies necessary for living in today's world include acquisition of geographic concepts, skills, and knowledge and the ability to utilize these in critical thinking. The skills listed in this publication for the most part are neither minimum nor maximum ones for geographic education, but may be used to meet unique, local needs in planning programs.

GEOGRAPHIC SKILLS
GRADES K-2

SIZE AND SHAPE

Level 1

Recognizes that the earth is basically round

Begins to understand that the globe is a model of the earth

Level 2

Uses small objects to represent large ones

Defines the earth as a round ball

Level 3

Recognizes oceans and continents

Compares the size of the United States (and/or Texas) on various maps and globes

Identifies a map as representing a large area on earth

Compares an area's size and shape as shown on a wall map to the way they are shown on a globe

DIRECTION AND LOCATION

Level 1

Locates self in relation to things in the environment

Describes relative locations of objects by using the terms right-left, up-down, near-far, over-under, here-there, and back-front

Becomes familiar with cardinal directions placed on the correct walls

Learns to say his or her address and phone number

Level 2

Uses a globe to point out approximate locations of places discussed

Recognizes water and land areas on maps and globes

Understands the meaning of his or her address

Uses left and right as directions

Understands that things are located in definite relation to and direction from each other

Generalizes about the physical environment in which he or she lives, such as that it is flat or hilly

Learns and locates his or her city and state on a globe

Learns that north is toward the North Pole and south is toward the South Pole

Locates north and south on a globe

Level 3

Recognizes north, south, east, and west

Is introduced to the concept that the equator is a great circle dividing the earth into two hemispheres

Learns the names of the northern and southern hemispheres and located them on a map or globe

Distinguishes between up and down and north and south

Reads directions from maps correctly oriented on the floor

Locates the equator, Tropics, Circles, and Poles on a globe

Locates his or her own country, continent, and places studied on a map or globe

Understands that a map can be used to determine the direction of one place from another

Locates places as being north or south of the equator

Is introduced to north-south, east-west lines on globes

Begins to use cardinal directions

SCALE AND DISTANCE

Level 1

Uses bigger-smaller and nearer-farther to express relative size and distance

Uses a globe to learn that there is more water than land on earth

Level 2

Uses approximate distances between familiar places, such as number of blocks from home to school

Uses picture maps to show relative scale differences between features, such as small houses and larger schools

Level 3

Estimates by blocks distances from the school to nearby sites and then takes a walking field trip to check them

Uses simple measures such as inch, foot, yard, mile, centimeter, decimeter, meter, and kilometer to compute distances on a map

SYMBOLS

Level 1

Recognizes symbols in the environment, such as signs in the neighborhood and traffic signals

Verbally describes his or her environment and understands that pictures can show this environment

Level 2

Understands that symbols represent real things

Recognizes color as symbols for land and water on simple maps and globes

Understands differences in natural features and changes which people have made on the landscape, such as the difference between creek erosion and a road

Interprets the environment in painted pictures

Associates the proper picture symbols with natural features and phenomena caused by people

Level 3

Recognizes landmarks in own town

Defines symbols as pictures which represent real features

Reads simple legends such as symbols for rivers and mountains

Uses map symbols rather than labels

Applies symbols to individual map projects

Makes up and uses his or her own symbols in mapping an area studied

EARTH AND SUN RELATIONSHIPS

Level 1

Develops concepts of summer, fall, winter, and spring

Understands the terms day and night

Becomes acquainted with the names of the months

Learns the days of the week

Level 2

Understands the purposes of clocks and calendars

Understands the vocabulary of time and chronology, such as today, yesterday, hours, and minutes

Knows and applies the names of the days in order

Finds special dates on the calendar

Associates certain physical characteristics with specific months and seasons

Level 3

Begins to tell time by the clock

Uses the names of months correctly

Identifies the directions of sunrise and sunset

Learns that the earth turns and causes day and night

Notes the relationship of the sun to the time of day

Is introduced to the terms clockwise and counterclockwise

USES, INFERENCES, AND PATTERNS

Level 1

Interprets pictures

Level 2

Makes a simple, large-scale map of the classroom

Makes a diagram of the classroom

Interprets simple picture maps

Level 3

Makes simple, large-scale maps of the neighborhood

Compares pictures of landmarks with pictorial maps

Makes large-scale maps of places in the community using familiar landmarks

Begins to use relative directions

Reads simple maps and globes and relates the information to his or her own setting

Realizes that friends and relatives live in other places which can be located on maps and globes

Describes verbally or illustrates in a drawing places visited

Draws conclusions from information on maps, such as that Africa is larger than Australia

GEOGRAPHIC SKILLS
GRADES 3-4

SIZE AND SHAPE

Level 1

Recognizes land and water types by their shapes, such as islands, bays, isthmuses, lakes, and peninsulas

Level 2

Learns to draw freehand a map with the continents and oceans

Level 3

Draws freehand countries studied

Draws Texas freehand

DIRECTION AND LOCATION

Level 1

Gives the relative location (north, south, east, or west) of other continents to North America

Uses the compass rose on maps to determine directions

Locates places in relation to oceans and continents

Learns to locate eastern and western hemispheres and the prime meridian and the 180th meridian

Understands the need for a grid system and locates places on a map, using a simple grid

Level 2

Learns and uses intermediate directions of northeast, northwest, southeast, and southwest

Learns to use a simple map for a class or an individual field trip

Uses maps and globes to locate places studied

Finds north at noon by facing his or her shadow and locates the other three cardinal directions

Level 3

Uses a magnetic compass to determine directions and to orient maps

Learns to use parallels and meridians, latitude and longitude to determine direction and location

Uses various maps, such as the Texas highway map and atlas maps, to locate places studied

Draws simple maps to get from one place to another

Understands that a hemisphere is any half of the earth obtained by bisecting it with a great circle

Learns to locate on maps and to draw countries studied

Learns the major rivers and cities of Texas and locates them on maps

SCALE AND DISTANCE

Level 1

Learns that scales on maps indicate distances from one place to another

Looks for and uses scales on maps

Is introduced to sea level, elevation, and altitude

Level 2

Is introduced to acres and miles (or hectares and kilometers) and walks them off in a field trip around the school

Solves problems measuring distances indoors and outside and on maps and globes

Level 3

Adds mileage on a highway map to get distance

Compares different types of transportation between major cities and determines which type takes the shortest route and which is the fastest

Understand that all great circles divide a globe in half no matter where they are placed and that they are the shortest distances between two points

SYMBOLS

Level 1

Learns local names for landscape features in the community and uses symbols for them on simple maps

Interprets legends or keys on different maps

Learns that color is used mostly on political maps and to show elevation

Level 2

Learns to use and interpret lines, dots, and colors on maps

Uses traditional symbols for such features as cities, railroads, rivers, and highways

Recognizes land and water on globes, chalkboard drawings, physical-political maps, and weather maps

Describes verbally and locates coastlines on maps

Differentiates between people-drawn boundaries and natural boundaries (those which follow natural features, such as mountains or rivers)

Level 3

Uses legends to find capital cities and distinguishes them from other cities

Understands simple abbreviations on maps

Uses two different types of maps to get information about the same area

Learns to read local maps to determine features caused by people of his or her community

Recognizes different types of boundary lines, such as county, state, national, and international ones

Compares aerial photographs of an area with maps and pictures of the same area

EARTH AND SUN RELATIONSHIPS

Level 1

Understands the relationship of agriculture to the seasons and applies concept to the local area

Learns that the earth turns counterclockwise from west to east

Level 2

Understands that the earth is a planet and names in order from the sun all of the planets

Understands the effects of the moon on the tides

Level 3

Describes the earth's motion around the sun, both rotation and revolution

Understands the inclination (or tilt) of the earth's axis

USES, INFERENCES, AND PATTERNS

Level 1

Understands and uses the terms "opposite from" and "similar to" in comparisons

Describes the community in which he or she lives verbally and by drawing pictures or simple maps

Level 2

Learns physical features of the landscape, such as mountains, glaciers, and deserts

Maps businesses, industries, and/or schools in the community

Maps resources of the community

Describes both the general and the specific content of maps and globes used

Distinguishes between towns, cities, states, countries, and continents verbally and by using maps

Level 3

Draws maps which include keys, titles, dates, and compass roses

Knows the characteristics of a map – shape, size (equal area), distance and direction – and understands that a map usually portrays at least one of these characteristics accurately but never all four

Understands that maps are made for many reasons and that different maps give different information

Knows some of the resources of the locale and state by using resource maps

Finds flat, hilly, and high elevations of plateaus and mountains on maps

Begins to understand some of the causes of climates, such as elevation, ocean currents, and location in relation to the equator

Learns how currents affect states and countries, such as how the Gulf Stream affects Texas and the countries of the North Atlantic Ocean

GEOGRAPHIC SKILLS
GRADES 5-6

SIZE AND SHAPE

Level 1

Makes sketch maps of the places studied

Understands and draws the various types of land forms

Understands simple map distortions, such as oversized Greenland on a Mercator projection

Level 2

Learns from maps the major physical regions of the United States, Canada, and Latin America and their characteristics

Learns the major rivers and mountain chains of the United States, Canada, and Latin America and locates them on a map or globe

Sketches a map of the Americas, including all the countries of North, Central, and South America

Level 3

Compares aerial photographs taken from space with a globe and understands the horizon

DIRECTION AND LOCATION

Level 1

Determines the coordinates (latitude and longitude) for specific places

Is able to define and to determine upstream or downstream on a map and the source and mouth of a river

Determines the confluences of a river and uses the arrowhead shape to determine the river's direction

Level 2

Understands that the equator is 0° latitude, the Tropics are 60° north and south latitudes, and the Poles are 90° north and south latitudes

Orients different types of map projections using the magnetic compass

Orients self outdoors using the magnetic compass

Learns that north can be other places on a map than at the top

Understands that great circle routes are straight lines on a Mercator projection

Uses terms low, middle, and high latitudes correctly, relating low latitudes to the equator and high latitudes to the polar regions

Names and locates all the countries of the Americas and their capitals

Names and locates all the states of the United States and their capitals

Gives the relative directions of other places from the United States or Texas

Uses the atlas and locates places of historical and current interest

Level 3

Learns that the North Star (Pole Star) can be used to determine the direction of north in the northern hemisphere and the Southern Cross to determine south in the southern hemisphere

Understands the difference between true north and magnetic north as shown by a magnetic compass

Locates prime cities for countries studied

SCALE AND DISTANCE

Level 1

Checks scales on maps and uses them to measure distances

Compares mileage scales on several map projections of the same area

Level 2

Understands that large-scale maps show more detail than small-scale maps

Estimates distances and then checks them by using mileage scales

Level 3

Measures and compares air, land, and water routes between places studied

Understands and computes distance and time

Learns the approximate distance between major lines of latitude (1° of latitude = 70 miles) and longitude (1° of longitude = 70 miles at equator and 1° = 0 miles at Poles)

Estimates distance between places which cannot be measured by a scale but which have latitudes anywhere and longitudes at the equator

SYMBOLS

Level 1

Understands that different symbols may represent similar or the same things

Understands and uses a variety of symbols

Finds and uses standardized symbols on several maps

Discovers that not all maps and globes list in their legends all the symbols used

Uses the legend to interpret the special use of color to present various kinds of information, such as population density, food production, and language distributions

Puts geographic data into simple box graphs

Level 2

Understands sea level and uses it to determine elevation above and below sea level

Understands the significance of map titles

Is able on the appropriate map to use the key to find the population size of each city

Refines ability to gather information from pictures

Devises map symbols and keys for outline maps used for special purposes

Determines the basis on which a graph or table is made and understands the units of measure involved

Level 3

Compares on different maps the various uses for the same kinds of symbols, such as lines and dots

Understands relief on a map or globe as it is shown by merged colors, shading, contours, and hachures

Uses various types of graphs to understand geographic data

Makes graphs to express geographic relationships

EARTH AND SUN RELATIONSHIPS

Level 1

Understands the relationship of the sun to the equator, to the Tropics of Cancer and Capricorn, and to the Arctic and Antarctic Circles

Understands time zones and their relation to the earth's rotation

Level 2

Understands the relationship of the moon to the earth and the earth to the sun

Understands the causes of solar and lunar eclipses

Understands and draws the earth's and moon's orbits

Level 3

Understands the division of the globe into 360°

Understands the reason for leap year and the time involved in the earth's revolution

Understands and demonstrates that the earth rotates from west to east in a counterclockwise motion with its axis tilted about 23°

Understands that inclination, parallelism of the earth's axis, and revolution cause seasons

Learns to use and make an analemma to determine the latitude of where the sun's rays strike the earth vertically at noon each day

USES, INFERENCES, AND PATTERNS

Level 1

Understands that a map may represent a small to vast area on earth

Locates and compares areas of resources in the United States, Mexico, and Canada

Correctly records data on maps

Learns to choose the best map for the problem to be solved

Uses maps and globes to explain the geographic setting of historical and current events

Compares map and text descriptions of an area to draw inferences from them

Level 2

Notes the effects of major rivers on settlements and the occupational activities of regions

Creates maps to convey information and relationships

Locates natural features which influenced exploration and settlement

Infers cultural activities or ways of living from physical details and latitude on maps of places studied

Uses a highway map for locating places by number and key and plans a trip detailing distance, direction, location, time, and activities

Interprets the elevation of land from the flow of rivers

Distinguishes between climate and weather

Level 3

Reads and makes inferences from information on maps, graphs, and tables

Converts map information into graphs and puts graph data on maps

Traces and compares trade and travel routes of areas studied

Learns to use all parts of a world atlas

From studying maps, notes those factors which seem to determine the location of the major cities

Knows the characteristics of a map (area, shape, distance, and direction) and determines distortions on maps used in class

Compares old and new maps to determine changes made in an area